REMARKS

Summary of Rejections

The Examiner objected to the specification as providing no antecedent basis for a computer readable medium; rejected claims 17-18, 21-15, and 28-30 under 35 U.S.C. §101 as drawn to non-statutory subject matter; rejected claims 1, 5, 6, 8, 12, 13, 15, 17, 24, 28, 29, 31, 33, 37, 39, 42, and 43 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,968,349 to Owen et al. (Owen) in view of U.S. Patent No. 4,864,616 to Pond et al. (Pond); rejected claims 2, 9, 16, 18, 25, 32, 34, and 40 under 35 U.S.C. §103(a) as unpatentable over Owen in view of Pond and U.S. Patent Application Publication No. 2003/0023850 to Brown et al. (Brown); and rejected claims 7, 14, 23, 30, 38, and 44 under 35 U.S.C. §103(a) as unpatentable over Owen in view of Pond and U.S. Patent No. 6,557,044 to Cain (Cain).

Summary of Amendments

By this amendment, Applicants amend claims 1, 8, 15, 17, 24, 31, 33, and 39 to more clearly define the features of those claims and amend claims 18, 21, 22, 23, 25, and 28-30 to improve form.

Claims 1, 2, 5-9, 12-18, 21-25, 28-34, 37-40, 43, and 44 are pending.

Objections to the Specification

The Examiner objected to the specification as providing no antecedent basis for a computer readable medium. Applicants submit the specification explicitly supports the phrase "computer readable storage medium." Claims 17-30 as originally filed on February 18, 2004 recite a computer readable medium. Because claims 17-30 are part of the original specification, the specification supports a computer readable storage medium.

Rejections under 35 U.S.C. §101

The Examiner rejected claims 17-18, 21-15, and 28-30 under 35 U.S.C. §101 as drawn to non-statutory subject matter. Applicants submit that the amendments to claims 17-17, 21-25, and 28-30 obviate the basis of the rejection as the claims now recite a computer-readable storage medium, clearly statutory subject matter under *In re Beauregard*.

Rejections under 35 U.S.C. §103

The Examiner rejected claims 1, 5, 6, 8, 12, 13, 15, 17, 24, 28, 29, 31, 33, 37, 39, 42, and 43 under 35 U.S.C. §103(a) as unpatentable over Owen in view of Pond. Applicants respectfully traverse this rejection.

Claim 1 recites a combination including, among other thing, the following features: I don't see where you argue this element. "receiving a second data record to be stored on a single database, wherein the database comprises a first data record," and "computing a second integrity checksum for the second data record with a cryptographic method using a storage key, the retrieved first integrity checksum and the second data record, wherein the storage key represents an identity of a signing entity authorized to sign data records."

In contrast, Owen discloses calculating a validation value for data and metadata in an old record before the record is changed. Calculating the validation value thus includes computing a checksum using data in an old record and metadata for the old record. Specifically, Owen states:

> Note that the algorithm used to generate the validation value in step 1120 of method 1100 in FIG. 11 must be the same as the algorithm used to generate the validation value in step 1230 of method 1200 in FIG. 12. This assures that the validation values will match when the database record is in the expected state just before applying the change represented by the journal entry. In the preferred embodiments, **the validation value comprises a checksum that is computed using both the data in the old record and the metadata for the old record.** Another type of suitable validation value is a cyclic redundancy check (CRC) that provides a unique value that indicates the state of the record before applying the change. The preferred embodiments expressly extends to any

and all variations of validation values that can be computed or generated that uniquely represent the state of the record just before applying the change reflected in the journal entry.

Owen, col. 8 lines 38-54. Emphasis added. The Examiner alleges that the checksum calculated using an old record and metadata for the old record corresponds to computing an integrity checksum using a storage key, an integrity checksum for a first file, and a second data record. Applicants disagree for at least the reasons given below.

A close reading reveals that Owen is completely silent with respect to an integrity checksum computed using a storage key and the second data record, where the second data record is to be stored on a single database. Owen describes a checksum which is computed using both the data in an Owen old record and Owen metadata for the old record. The Owen checksum, based on the old record data, is stored with the new record. Thus, the Owen checksum is based on the Owen old record (the record being modified) rather than the Owen record that is going to be stored in the database. Therefore, the Owen checksum cannot possibly include the claim 1 "second data record," where the second data record is to be stored in a database. Owen thus fails to disclose at least the following feature of claim 1: "computing a second integrity checksum for the second data record with a cryptographic method using a storage key, the retrieved first integrity checksum and the second data record." While Pond discloses cryptographically labeling electronically stored data, Pond fails to cure the aforementioned deficiencies of Owen. For at least this reason, claim 1 is allowable over Owen and Pond, whether these references are taken individually or in combination, and the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn.

Amended claim 1 further recites, among other things, the following feature: "wherein the storage key represents an identity of a signing entity authorized to sign data records."

While <u>Owen</u> discloses a database journal, <u>Owen</u> is completely silent with respect to a storage key, let alone a storage key representing an identity of a signing entity authorized to sign data records. Therefore, <u>Owen</u> fails to disclose at least the following feature of claim 1: "wherein the storage key represents an identity of a signing entity authorized to sign data records." While <u>Pond</u> discloses cryptographically labeling electronically stored data, <u>Pond</u> fails to cure the aforementioned deficiencies of <u>Owen</u>. For at least this reason, claim 1 is allowable over <u>Owen</u> and <u>Pond</u>, whether these references are taken individually or in combination, and the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn for this additional reason.

Independent claims 8, 15, 17, 24, 31, 33, and 39, include similar features as noted above with respect to claim 1. For at least the reasons noted above with respect to claim 1, independent claims 8, 15, 17, 24, 31, 33, and 39 as well as claims 2, 5-7, 9, 12-14, 16, 18, 21-23, 25, 28-30, 32, 34, 37, 38, 40, 43, and 44, at least by reason of their dependency, are allowable over <u>Owen</u> and <u>Pond</u>, whether these references are taken individually or in combination, and the rejection of those claims under 35 U.S.C. §103(a) should be withdrawn.

The Examiner rejected claims 2, 9, 16, 18, 25, 32, 34, and 40 under 35 U.S.C. §103(a) as unpatentable over <u>Owen</u> in view of <u>Pond</u> and <u>Brown</u>. Applicants respectfully traverse this rejection.

Claim 2 depends from claim 1 and includes all the features recited therein including, among other things, "computing a second integrity checksum for the second data record with a cryptographic method using a storage key, the retrieved first integrity checksum and the second data record, wherein the storage key represents an identity of a signing entity authorized to sign data records." Claims 9, 16, 18, 25, 32, 34, and 40, although of different scope, include features similar to the noted feature of claim 2. For at least the reasons noted above, neither <u>Owen</u> nor

Pond discloses or suggests this noted feature of claim 2. While Brown discloses saving logfiles, Brown fails to cure the aforementioned deficiencies of Owen and Pond. Therefore, dependent claims 2, 9, 16, 18, 25, 32, 34, and 40 are allowable over Owen, Pond, and Brown, whether these references are taken individually or in combination, and the rejection of those claims under 35 U.S.C. §103(a) should be withdrawn.

The Examiner rejected claims 7, 14, 23, 30, 38, and 44 under 35 U.S.C. §103(a) as unpatentable over Owen in view of Pond and Cain. Applicants respectfully traverse this rejection.

Claim 7 depends from claim 1 and includes all the features recited therein including, among other things, "computing a second integrity checksum for the second data record with a cryptographic method using a storage key, the retrieved first integrity checksum and the second data record, wherein the storage key represents an identity of a signing entity authorized to sign data records." Claims 14, 23, 30, 38, and 44, although of different scope, include features similar to the noted feature of claim 7. For at least the reasons noted above, neither Owen nor Pond discloses or suggests this noted feature of claim 7. While Cain discloses a routing table of pointers to checksum values, Cain fails to cure the aforementioned deficiencies of Owen and Pond. Therefore, dependent claims 7, 14, 23, 30, 38, and 44 are allowable over Owen, Pond, and Cain, whether these references are taken individually or in combination, and the rejection of those claims under 35 U.S.C. §103(a) should be withdrawn.

CONCLUSION

On the basis of the foregoing amendments, the pending claims are in condition for allowance. It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

The Commissioner is hereby authorized to charge any additional claim fees and any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 39700-612001US/NC43225US. If there are any questions regarding this reply, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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